



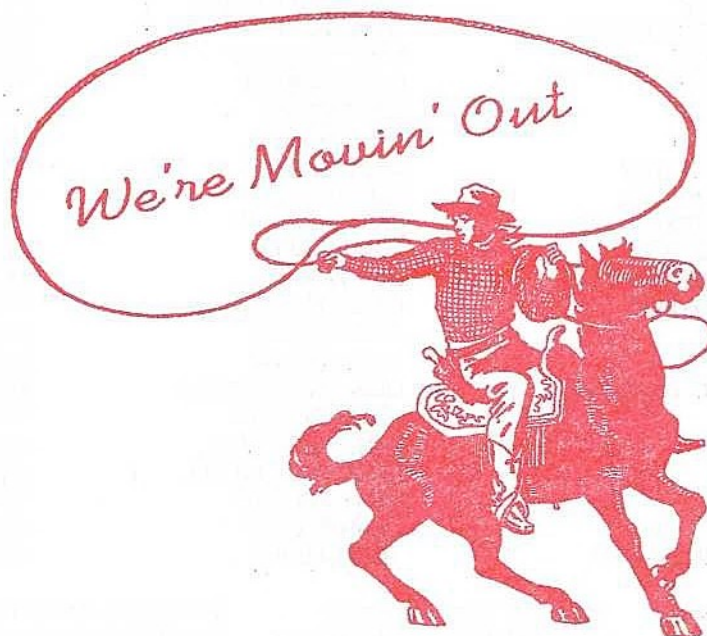
B.A.R.G. NEWS

FEBRUARY 1995 VOL 18 NO 1.

NEWSLETTER OF THE BALLARAT AMATEUR RADIO GROUP INC.

PLEASE NOTE

THE FEBRUARY
MEETING
ON
FRIDAY 24th. FEBRUARY
WILL BE THE
**LAST BARG
MEETING**
TO BE HELD AT THE
BALLARAT
EDUCATION
CENTRE



VENUE CHANGE

Due to recent changes which have been adopted at the
Ballarat Education Centre
the current venue is no longer available to us for BARG meetings.

AS FROM MARCH 1st.

**ALL BARG MEETINGS WILL BE HELD AT
THE BALLARAT ADULT & FURTHER
EDUCATION CENTRE (BRACE)
602 URQUHART ST.**

Please note that the March Committee Meeting will now be held
on Wednesday March 15th. instead of March 22nd.



BALLARAT AMATEUR RADIO GROUP INC.

OFFICE BEARERS - 1994 / 1995

			WORK	HOME
PRESIDENT	BOB TERRILL	VK3BNC		395317
VICE PRESIDENT	GORDON CORNELL	VK3FGC	391135	392427
IMM.PAST PRESIDENT	CLIFF BILSTON	VK3CCB	204321	361249
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TREASURER	HARRY HEKKEMA	VK3KGL		357563
MEMBERSHIP SECRETARY	NORM D'ANGRI	VK3LBA		341613
NEWSLETTER EDITOR	NORM D'ANGRI	VK3LBA		341613
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EXAMINATIONS OFFICER	CHARLIE STEWART	VK3DCS		317425
TECH. OFFICER	DICK ANTOZIEWICZ	VK3AEX		323273
TECH. OFFICER (DIGITAL)	TOM GEORGE	VK3DMK	327234	
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MEMBERS' REP.	CLIFF BILSTON	VK3CCB	204321	361249
MEMBERS' REP.	REG CARTER	VK3CAZ		417585
QSL MANAGER	DOUG RAPER	VK3VBA		323565
NET CO-ORDINATOR	CLIFF BILSTON	VK3CCB	204321	361249
AWARDS MANAGER	MAURIE BATT	VK3XEX		422245
LIBRARIAN / HISTORIAN	RICHARD VOSS	VK3JFL		326048
PUBLICITY OFFICER	JEFF MULLER	VK3LU		328314
PROPERTY OFFICER	JEFF PIGDON	VK3PAP	311211	327041
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	GEOFF SMITH	VK3ADB	358601	332112
	TOM GEORGE	VK3DMK	327234	
TECHNICAL COMMITTEE	DICK ANTOZIEWICZ	VK3AEX		323273
	IAN McDONALD	VK3AXH		
	DICK FORRESTER	VK3VU	337080	357663
	DAVID McCONNELL	VK3YNB		
	BEN ORCHARD	VK3TOP		377836
	DEAN SPEEDIE	VK3LDS		332741
HAMVENTION CO-ORD.	TOM GEORGE	VK3DMK	327234	
LIFE MEMBERS:	MAURIE BATT (VK3XEX)	IAN McDONALD (VK3AXH)		
	GEORGE SMALL (VK3DKJ) SK	JIM WRIGHT (VK3CFB)		
	KEVIN HUGHES (VK3WN)	PHIL SEDDON (VK3AQM)		
	STAN WIDGERY (VK3SE)			

CLUB STATION

VK3 BML

REPEATERS

VK3RBA (Voice) 146.750 MHz. - Mt.Buninyong.
 VK3RBS (Voice) 146.900 MHz. - Smeaton Hill
 VK 3RPC (Packet) 144.750 MHz. - Mt.Warrenheip.
 VK3RBU (Voice) 438.475 MHz. - Mt.Hollowback.
 VK3RMB (Beacon) 432.535 MHz. - Mt.Buninyong

ACTIVITIES

CLUB NET: Thursday nights at 8 pm. (8.30 pm during Daylight Saving). Freq: 3.610 MHz +/- QRM.

2 METRE SCRAMBLE: Sunday Nights at 7.50 pm. Freq: 146.425 to 146.600 MHz. Inc.

Call back held on VK3RBA 146.750 MHz.

Logs monthly to D.Quirk - P.O. Box 78 - Newstead 3462 (or Meeting) to qualify.

MEETINGS: General Meeting : Last Friday of each month (except December) at 7.30 pm.

Natter Night : 2nd Friday of each month.

Venue: Ballarat Adult & Further Education Centre (BRACE) 602 Urquhart St. (Cnr. Windemere St.)

FOX HUNTING: As arranged during the year.

PLEASE ADDRESS ALL CORRESPONDENCE to:

The Secretary - BARG Inc.
 Box 1261
 Mail Centre
 Ballarat 3354

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The Minutes

MINUTES OF BARG MEETING HELD 27TH JANUARY 1995



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The meeting opened at 7.40pm. and members were welcomed & wished well for 1995 by President Bob VK3BNC.
APOLOGIES were accepted on behalf of VK3's CUH, ANH, DS, XEX, VU, AEX, TDG, KQF, JFZ, and CFB with best wishes for a speedy recovery to Shirley - XYL of VK3DCS
MINUTES of December meeting were confirmed as circulated
CORRESPONDENCE Re BCEC (Room Hire), Licence Fees, Moved to General Meeting.
ACCOUNTS FOR PAYMENT BCEC (Room Hire) \$35.00, WIA (VHF Mag.Subs) \$55.00, Concord Insurance (Liability Policy) \$137.00, John Graham (Newsletter Printing) \$49.50, Petty Cash (Treasurer - Postage) \$16.75, WIA (Call Books) \$193.30, Lawrence & Hansen (T Plugs/Sockets) \$72.55, MPRG (Network Equip. Packet Radio) \$950.00, PCB's (Packet Modems) \$30.00

XDQ/CAZ
 FGC/XDQ
 NTA/DOK.
 KGL/CCB

REPORTS These were minimal owing to Office Bearers still on vacation.

SCRAMBLE: - New system of logs working OK.

WICEN - Training to be 11th. & 12th. February - Courier Classic.

QSL's - Nil received during festive season.

EDUCATION - Courses advertised - BAFEC - 23rd February for 18 weeks.

BARG NET - In operation for 1995.

REMINDER Submission of monthly reports to Newsletter Editor.

GENERAL BUSINESS

- * Re new Meeting Venue as from 28/2/95. Committee to select a venue best suited to club needs. CCB/swl VAL
 - * Re Licence Structure - Short address by Ian VK3AXH on SMA proposals.
 - * Fax and letters to relevant ministers to register disapproval of above by licenced amateurs of BARG - CFH/CIS
 - * Request for investigation of Ben Nevis as proposed repeater site. VTAC to be consulted. PAL/YNB
 - * Letter of thanks to Lee Roberts for assistance in re-establishment of RPC. KQQ/DNA
- IN PASSING - Western Zone Hook-Up. Mary Rose Exhibition, Practical Night Diary., 23cm.Demonstration.
 Meeting concluded at 9.05pm. and George (DOK) conducted a Mini Auction of donated surplus gear.
 A pleasant start to 1995. Next Meeting Friday 24th Feb. (Final meeting at current venue) 73 de Geoff VK3ADB.



The President Reports

Bob - VK3BNC

Well we are up and running again. The kids are all back at school and I guess that most of us are now focused on the ensuing twelve months and those long awaited holidays are now just a memory.

Our immediate focus, thrust upon us with little warning, is of course our meeting rooms. Most of you will know that the Education Department has told us that we have to find alternative accomodation, as they are relocating the rooms we presently use. After a bit of running around your executive came up with a few options, and following discussions last meeting and further investigations, we are happy to announce that as from March we will meet in the B.R.A.C.E. establishment in Urquhart Street. This is a nice new building (built by VK3JEM and his merry band of apprentices) and very similar to our present venue, with off street parking. We will be making an announcement about the Practical Nights at our next club meeting. We hope that this new arrangement will meet with general approval as we felt that it is central and embodies all of the good features of the facilities that we currently enjoy.

On the radio side of things it is good to see that some members are busy taking advantages of holidays and good weather to play antennas. If you are thinking of building a Quad then take yourself off to VK3JEM's QTH and have a look at both the home brewed tower and antenna, and perhaps sample the other "stuff" as well. Remember if you are putting up antennas to let someone know, as there are plenty of people ready to help, and there are always some possible hazards lurking ready to spoil an afternoon's work.

The other night as I sat casually talking to Daryl VK3XDQ, through Oscar 13 some 80,000 kms."round trip" about this and that, I had to reflect on a VHF scene which has changed so drastically. As a schoolboy I had no concept of all this and wonder what my grandchildren will see in their lifetime. We have a great hobby with such a vast range of possible interests from Satellites, ATV, Packet radio, EME, Digital radio, QRP, propagation and so the list goes on, BUT WHERE ARE THE YOUNG PEOPLE? Why are we not attracting more to our ranks? Are we as a club doing enough to encourage them? In the months ahead can we address these problems and hopefully come up with some ideas that will make "Ham Radio" as enjoyable for the next generation as it has been for us?

I would also like to think that we have all become involved in the current debate on Amateur Licencing so that we can make informed judgements on the issues at stake.

Please remember your contributions to the magazine and help to make Norm's life easier
 73 de Bob VK3BNC.

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Homebrew a 20 Watt Dummy Load from David VK3MIJ



PARTS LIST

- 1 - Coffee or Milo tin with lid.
- 1 - SO 239 socket.
- 2 - pieces old circuit board.
- 1 - short length of braid.
- 20 - 1K 1 watt resistors.

- 1 Cut out two pieces of circuit board that will fit onto the bottom of your lid and still allow it to close. Place the two pieces of board together and drill all of the holes so that they will align correctly when it is time to solder on the resistors. See sketch Fig.1. Don't forget to drill a larger hole for the SO239 centre conductor to clear the top board and make contact with the bottom board. See the sketch at Fig.2.
- 2 When the drilling is completed, solder the braid and resistors to the top circuit board. Next you must carefully position the SO239 into place with the lid and top piece of board. You can now solder the two pieces of braid to the lid. See sketch Fig.3.
- 3 It is now a simple matter of lining up all of the resistors and the wire from the centre of the SO239 with the holes in the bottom board and soldering each joint.

On completion, put an SWR bridge in series with the dummy load and check for a 1:1 reading.

73 de David VK3MIJ.

FIG 1.

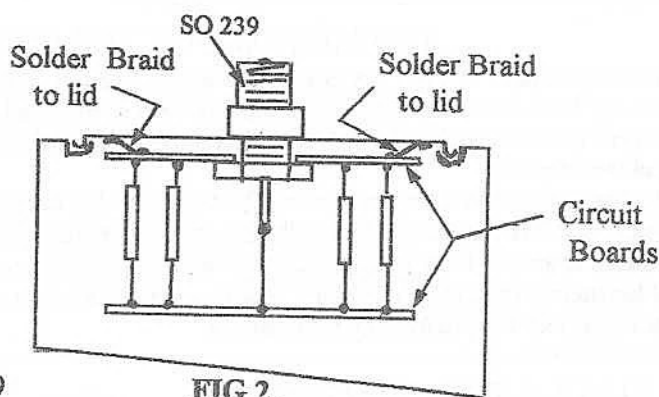
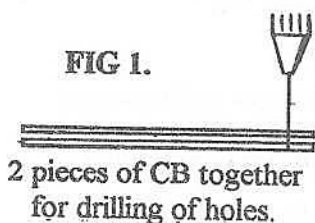
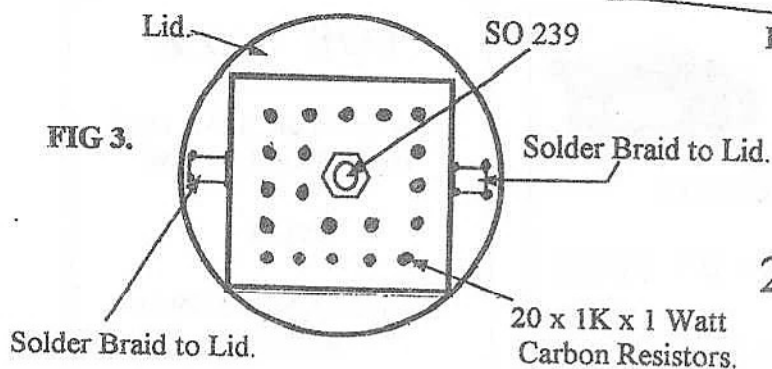


FIG 3.



20 Watt Dummy Load.

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73 de Bill VK3PH



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Prizes will be awarded to

1. The Smallest operational set.
2. The Loudest set.
3. The Most Authentic set.
4. The Most Ingenious set.

All sets must be capable of receiving 3BA and 3LO
(on different capacitor settings of course !)
Operational testing will be conducted using a
common 50 ft. antenna and will be held at the end
of March 1995. (Details and Venue to be notified.)



WHY ?

- * Do Creditors have better memories than Debtors ?
- * Are a fool & his money soon parting ?
- * Do Quarter Horses still have four legs ?

THE HISTORY OF THE QSL CARD.

QSL cards can be traced back to 1922, about the time when Australia and New Zealand operators began making regular overseas contacts. By 1926 / 27 some Australian operators were handling 80 or more cards per week. The ARRL started its "W.A.C." awards in April 1926 and in the early days operators valued getting reports from listeners, who were also sent QSL's in appreciation of their report.

The burden of postage resulted in Amateurs pooling their cards so they could be posted overseas in bulk.

A clearance house, or QSL Bureau, was set up in the UK in 1926 and this was later taken over by the RSGB. Australia's first Bureau was in Adelaide around 1928 and Bureaux were well established throughout the world by the early 1930's. The QSL Bueau is part of the tradition and spirit of Amateur Radio - Amateurs helping Amateurs.

73 de Doug VK3VBA (BARG QSL Manager.)

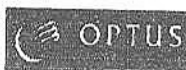


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From the Shack Bench with Reg - VK3CA3



A SELECTION OF "OVERVOLT" SAFETY CIRCUITS

Here are a few options that you can fit to your Power Supply Unit to prevent damage to your rig should the output of the P.S.U. exceed a preset value.

Two of them use relays to either remove the supply voltage or "short" it out so blowing the fuse. So in the case of these two, but especially with regard to circuit number 2, make sure the relay contacts can handle the current involved. D.S.E. stock a suitable relay (P8014) but connect its contacts in parallel to reduce the peak currents each set has to carry.

CIRCUIT NO. 1 This circuit will, if the output voltage rises above about 15.6 volts, latch up the relay in the overvolt position, disconnecting the supply to the regulator and rig whilst lighting an "overvolt" L.E.D. to let you know all is not well. Switching off the supply to the P.S.U. will allow the main filter capacitor to discharge through the bleeder resistor (if you remembered to fit it) and after a short while the "overvolt" L.E.D. will go out, so letting you know you can turn the P.S.U. on again and if all is well the safety circuit will stay reset. If it goes straight to "overvolt" then you have either a problem in the P.S.U. or were too impatient to allow the main filter capacitor to discharge fully. Purely as a matter of interest the BD139/140 combination act in exactly the same way as the S.C.R. and

form a self-latching circuit.

CIRCUIT NO. 2 will, if the output voltage rises above about 16 volts, turn on the BC558 and so trigger the S.C.R. This, in energising the relay, will short out the filter capacitor via the fuse and so blow it. The 10 μ f electrolytic capacitor, which could with advantage be a tantalum type, will slow down the action of the circuit a little so that it is less ready to react to short spikes or induced r.f. pulses. Again the job of blowing the fuse is done by the relay thus obviating the strain on the S.C.R. of making it blow the fuse.

The D.S.E. relay mentioned above is very suitable but if money is tight a cheap headlamp or horn relay will be OK and probably smaller if space is a problem.

CIRCUIT NO. 3 is the simplest of crowbars but relies on the S.C.R. to blow the fuse, so rate it adequately since it has to do all the dirty work. The price to be paid for the simplicity of the circuit is that the operating point is decided by component tolerances. To get the desired value of trigger voltage you may have to play about with zener diode voltage values. You can test it without excessive consumption of fuses by connecting a 12 volt globe between the anode of the S.C.R. and the supply so that it lights when the S.C.R. is triggered but don't forget to remove it from the circuit before sealing up the

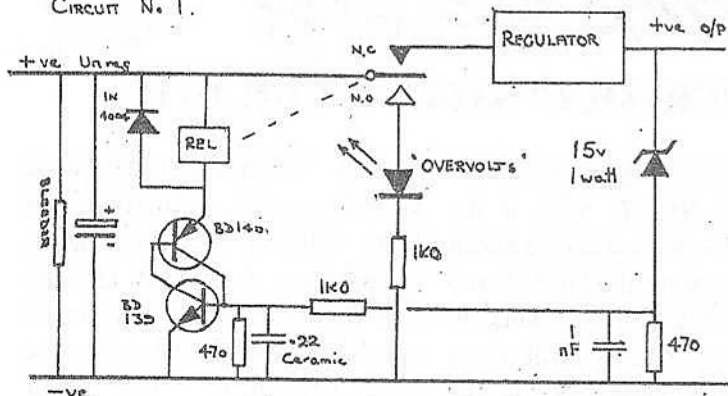
P.S.U. This circuit does place a strain on the regulator if the fuse follows the regulating circuitry so, if possible, arrange that the fuse is in the input to the regulator immediately after the filter capacitor. The zener diode of course is fed from the output terminal of the P.S.U.

CIRCUIT NO. 4 is a little more complicated but can be set by adjustment of the 10K pot. to an exact value of overvolt trigger point. Again, the S.C.R. needs an adequate rating (8amps at least). This circuit would make a very handy stand-alone safety device if fitted between somebody else's "unknown quality" P.S.U. and your rig, if you are operating in emergency or field conditions. If you fitted it in a box and used 32 volt ELV plugs and sockets it could be incorporated in a "power distribution box" for your rigs and so offer them some protection from an over-enthusiastic P.S.U.

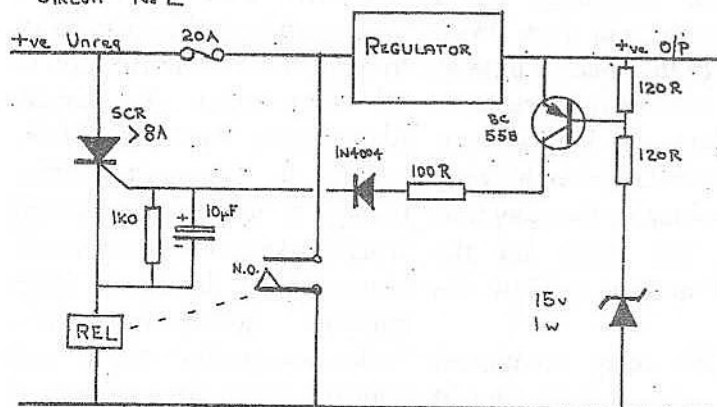
See circuits next page:



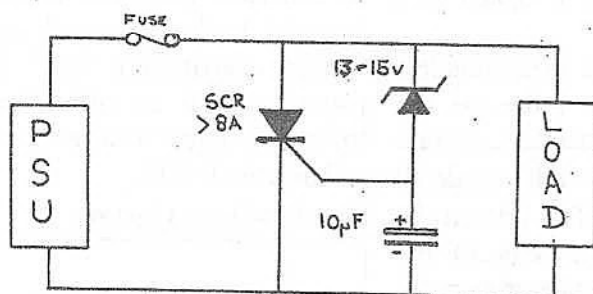
Circuit No. 1.



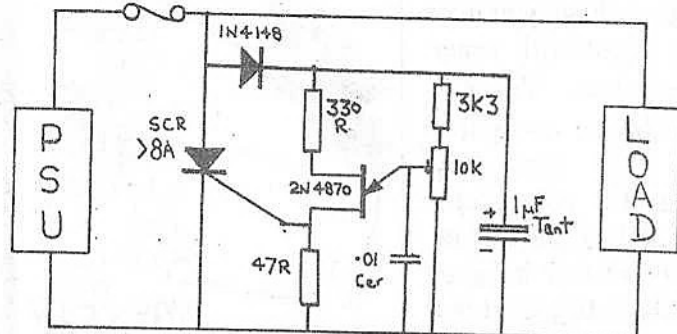
CIRCUIT N. 2



CIRCUIT N. 3



CIRCUIT. No. 4



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INFORMATION



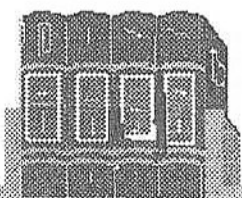
Coming Up

February Meeting Feb. 24th.

Maggie UK3CQI will talk on her extensive experiences in satellite communications.

March Meeting March 31st.

Tom UK3DMK will introduce the construction and "spin offs" of the Wind Generator.



The B.A.R.G. Bookshelf



The following is a catalogue of books held in the BARG Library
as compiled by our Librarian - Richard VK3JFL

<u>Title</u>	<u>Author / Pub.</u>
1000 Questions for Novice Candidates - 2 Copies	W.I.A.
1979 DX Listing Callbook	
500 Questions for AOCPC Candidates - 3 Copies	W.I.A.
Amateur Radio Action Magazine - Approx 350 issues	
Amateur Radio Magazine - All Issues	WIA
ARRL Handbook for Radio Amateurs - 1986	ARRL
ARRL Handbook for Radio Amateurs - 1988	ARRL
ARRL Handbook for Radio Amateurs 1993	ARRL
ARRL Satellite Anthology	ARRL
Assorted Magazines - QST, CQ, Catalogues etc.	
Basic Electronics	U.S. Navy
Build your own Test Equipment	Davidson
Creative Circuit Design	Gross Blatt
Digital Electronics Revealed	Mitchell
Electron Colour Tubes	Thorn
Electronics - Stage 1	Mitchell
Electronics Notebook Vol.2	Mitchell
Electronics Notebook Vol 1 - 2 Copies	Colin Mitchell
Fairchild Integrated Circuit Data - Vols 1 & 2	
FET Manual	
Guide to Amateur Radio	RSGB
Ham Cram Book	N.L.O.A.
Handbook for Operators of Radio Stations in the Amateur Service	Comm. of Australia
HF Antennas for all locations	Moxon
How to be a Ham	Sessions
Into Electronics	W.I.A.
Learning the Radio Telegraph Code	ARRL
Low Band DXing	Devoldere
Mastering the Morse Code	Ameco
Maths for Electronic Students	Tandy.
Novice Antenna Notebook	
Novice Electronics	W.I.A.
Packet Radio Primer	Coomler - Croft
Philips Preferred Type Range Catalogue 1986	Philips
Philips Radio Amateur Handbook	Beard
Practical Wire Antennas	Heys
QRP Classics	ARRL
QRP Club Circuit Handbook	
Questions & Answers for the Novice Candidate	VK3AKX.
Radio Communications - Book 1	RSGB
Radio Communications Handbook	RSGB
Radio Engineering Handbook - 3rd.Edition	Mc.Craw - Hill
Radio Handbook 1963	
Radio Servicing	Marcus & Levy
Radio Servicing Volume 1	Patchett
Radio Theory Handbook for Amateur Operators - (After March)	Swainston
Radio Valve & Teletube Manual - Vol 5.	
Rola Loudspeaker Data	
Satellite Experimenters Handbook	Davidoff
Single Sideband for Radio Amateurs	ARRL
Solid State Design for the Radio Amateur	ARRL
Test Equipment for the Radio Amateur	RSGB
Transistor Manual - 1983	
Transistor Manual - 1984	
Transistor Substitute Manual - 1983	
UHF / VHF Condminium	
Understanding Amateur Radio	ARRL
Valve Data Handbook - Volumes 1, 2, & 3.	S.T.C.
Wire Antennas	Orr & Cowan
Yaesu FT101 series Maintenance Manual	Yaesu

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BEST WISHES



FOR

1995

B.A.R.G.

THE BALLARAT AMATEUR RADIO GROUP INC.

A GROUP OF RADIO ENTHUSIASTS LICENSED TO EXPERIMENT
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NEW MEMBERS ALWAYS WELCOME

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OFFICIAL NEWSLETTER OF THE BALLARAT AMATEUR RADIO GROUP INC.

B.A.R.G. NEWS



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